CLAIMS

1. A method for reproducing conifers by somatic embryogenesis wherein a galactose-containing compound is used as a carbon source for an embryogenic culture during at least one of the steps of induction, proliferation, and prematuration.

2. The method of claim 1 wherein the galactose-containing compound is a sugar with galactose comprising one or more of the sub-units.

3. The method of claim 2 wherein the galactose-containing sugar is selected from the group consisting of monosaccharides, disaccharides, oligosaccharides, and polysaccharides.

4. The method of claim 3 wherein the galactose-containing sugar is lactose.

5. The method of claim 1 wherein the galactose-containing compound is less than about 6% of the nutrient medium.

6. The method of claim 1 wherein the nutrient medium is gelled or liquid.

7. The method of claim 1 wherein the conifers are selected from the family *Pinaceae*.

8. The method of claim 7 wherein the conifers are selected from the genera *Pinus, Picea* and *Pseudotsuga*.

9. The method of claim 8 wherein the conifer is *Pinus taeda* or a hybrid thereof.

10. The method of claim 8 wherein the conifer is *Pseudotsuga menziesii*.

11. The method of claim 8 wherein the conifer is *Pinus radiata*.

12. The method of claim 1 in which the embryogenic culture is cultured in at least one prematuration medium comprising a galactose-containing compound and then transferred to a maturation medium to produce cotyledonary stage embryos suitable for germination.

13. The method of claim 12 wherein the prematuration medium contains less auxin and less cytokinin than the nutrient medium used during proliferation.

14. The method of claim 12 wherein the prematuration medium further comprises abscisic acid.

15. The method of claim 3 wherein the galactose-containing sugar is supplemented with additional sugars.

16. The method of claim 15, wherein the additional sugars are readily metabolized.

17. The method of claim 16, wherein the additional sugars are selected from the group consisting of sucrose, glucose, and fructose.

18. The method of claim 1 wherein the galactose-containing compound is more than about 1% of the nutrient medium.

19. The method of claim 1 wherein the embryogenic culture contains early stage embryos.

20. The method of claim 1 wherein the galactose-containing compound is less than about 2% of the nutrient medium.

21. The method of claim 1 wherein the galactose-containing compound is between about 1% and about 6% of the nutrient medium.

22. The method of claim 1 wherein the nutrient medium further comprises an auxin and a cytokinin.

23. A method for reproduction by somatic embryogenesis of conifers selected from the group consisting of *Pinus taeda* and hybrids, *Pinus radiata*, and *Pseudotsuga menziesii* which comprises: using a galactose-containing compound during at least one of the steps of induction, proliferation, and prematuration.

24. The method of claim 23 wherein the galactose-containing compound is a sugar with galactose comprising one or more of the sub-units.

25. The method of claim 24 wherein the galactose-containing sugar is selected from the group consisting of monosaccharides, disaccharides, oligosaccharides, and polysaccharides.

26. The method of claim 25 wherein the galactose-containing sugar is lactose.

27. The method of claim 23 wherein the galactose-containing compound is less than about 6% of the nutrient medium.

28. The method of claim 23 wherein the nutrient medium is gelled or liquid.

29. The method of claim 23 wherein the conifer is *Pinus taeda* or a hybrid thereof.

30. The method of claim 23 wherein the conifer is *Pseudotsuga menziesii*.

31. The method of claim 23 wherein the conifer is *Pinus radiata*.

32. The method of claim 23 in which the embryogenic culture is cultured in at least one prematuration medium comprising a galactose-containing compound and then transferred to a maturation medium to produce cotyledonary stage embryos suitable for germination.

33. The method of claim 32 wherein the prematuration medium contains less auxin and less cytokinin than the nutrient medium used during proliferation.

34. The method of claim 32 wherein the prematuration medium further comprises abscisic acid.

35. The method of claim 24 wherein the galactose-containing sugar is supplemented with additional sugars.

36. The method of claim 35, wherein the additional sugars are readily metabolized.

37. The method of claim 36, wherein the additional sugars are selected from the group consisting of sucrose, glucose, and fructose.

38. The method of claim 23 wherein the galactose-containing compound is more than about 1% of the nutrient medium.

39. The method of claim 23 wherein the embryogenic culture contains early stage embryos.

40. The method of claim 23 wherein the nutrient medium further comprises an auxin and a cytokinin.

41. The method of claim 23 wherein the galactose-containing compound is less than about 2% of the nutrient medium.

42. The method of claim 23 wherein the galactose-containing compound is between about 1% and about 6% of the nutrient medium.

43. A method for reproducing conifers by somatic embryogenesis which comprises: growing conifer cells on a nutrient medium comprising a galactose-containing compound, an auxin, and a cytokinin to produce an embryogenic culture.